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[54] **MULTI-MODE VARIABLE BANDWIDTH REPEATER SWITCH AND METHOD THEREFOR**

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[58] **Field of Search** 455/422, 432, 455/433, 434, 435, 450, 451, 452, 453, 454, 455, 507, 509, 510, 517, 524, 525; 370/259; 379/67

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[57] **ABSTRACT**

An enhanced services communication system (**10**) has a standard services region and an enhanced services region (**58**) in which communication may be carried out. Subscriber units (**49**, **109**) located within the enhanced services region (**58**) request enhanced services that include dynamic allocation of bandwidth. A variable bandwidth repeater switch (**42**) evaluates the availability of requested bandwidth and allocates the bandwidth to the subscriber units (**49**, **109**) when available. Transmission of data using enhanced services occurs using wideband wired interfaces (**115**), wideband wireless interfaces (**70**), or PSTN interfaces (**103**). Selection of dynamic allocation of bandwidth may rely upon economic, propagation duration, or link quality factors, among other considerations.

21 Claims, 4 Drawing Sheets